

FIGURE 1

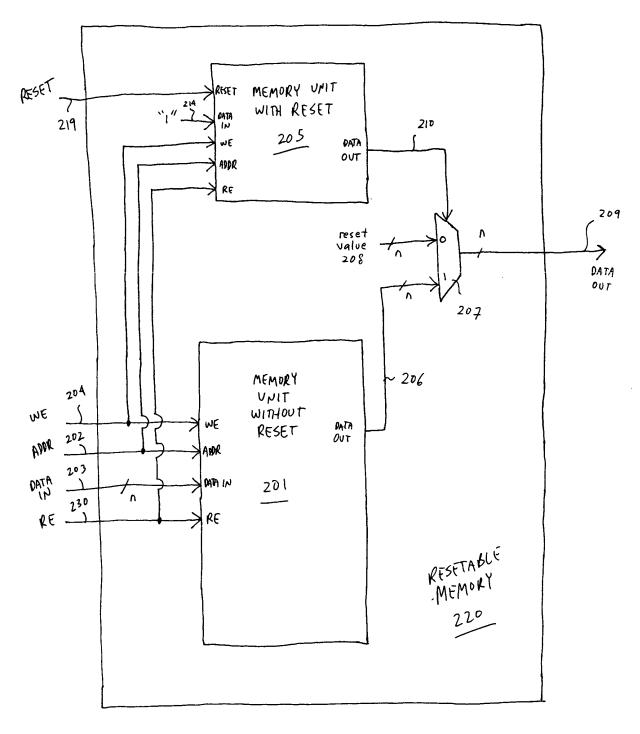
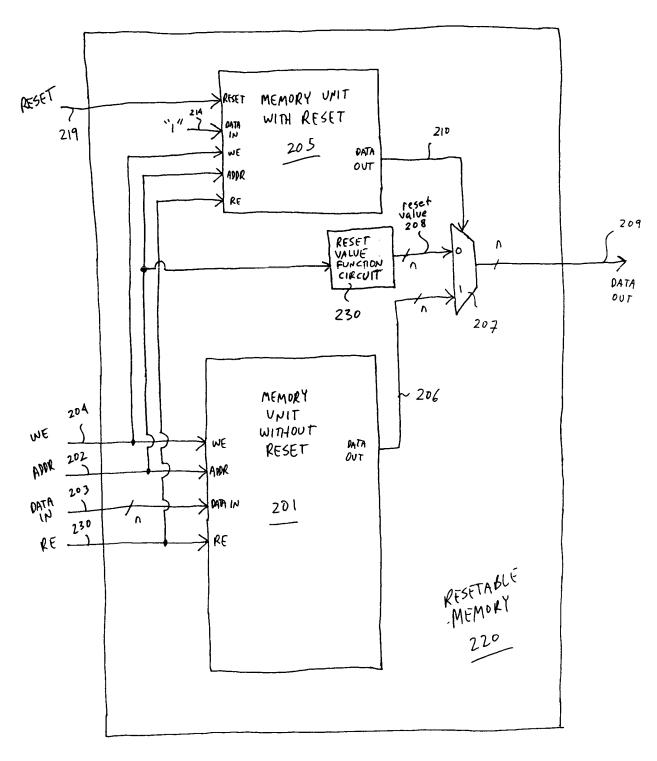


FIGURE 2A



FIGURÉ 2B

```
module synReset(data_in, addr, reset, we, clk, data_out);
parameter data_width = 1024;
parameter addr_width = 10;
parameter RAMsize = 8;
parameter reset_value = 8D0;
input [data_width-1:0] data_in;
input [addr_width-1:0] addr;
input reset, we, clk;
output [data_width-1:0] data_out;
integer i;
reg [data_width-1:0] mem [RAMsize-1:0];
wire [data_width-1:0] data_out;
//synthesis loop_limit 2000
always @(posedge clk)
begin
       if(reset == 1b1)
       begin
              for (i=0; i < RAMsize; i=i+1)
                      begin
                             mem[i] = reset_value;
                      end
        end else if(we == 1'b1)
        begin
                      mem[addr] = data_in;
        end
 end
 assign data_out = mem[addr];
 endmodule
```

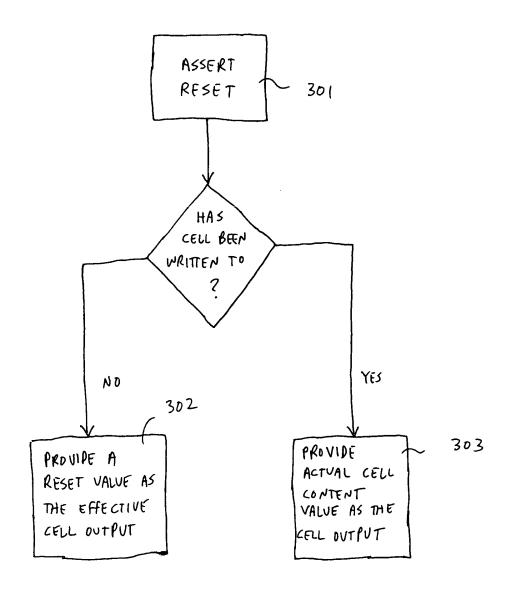


FIGURE 3

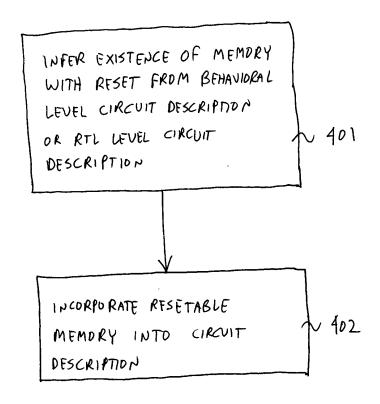


FIGURE 4

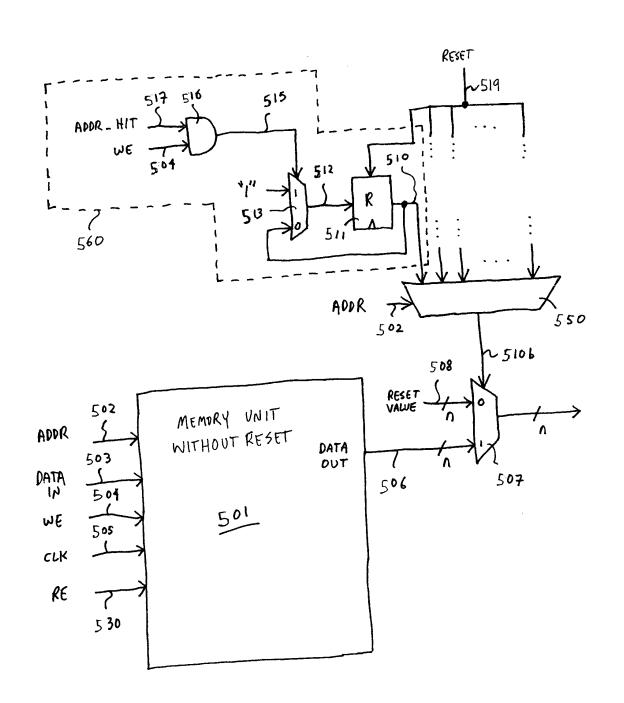


FIGURE 6

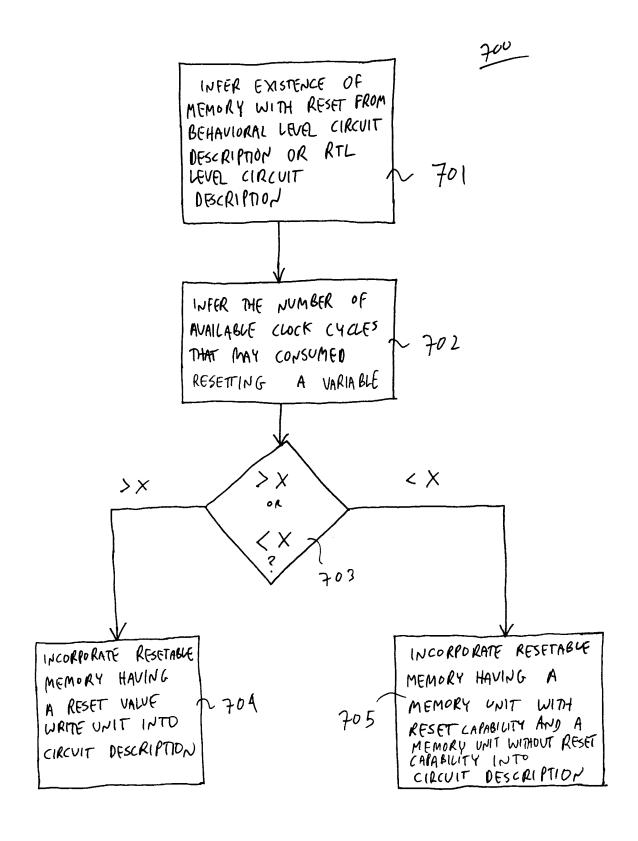


FIGURE 7

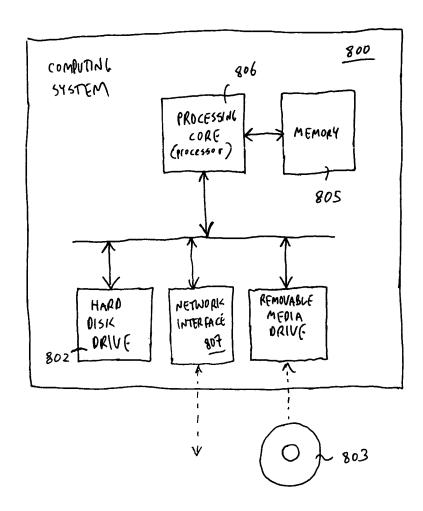


FIGURE 8